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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,619	12/13/2001	Kamakshi Sridhar	1285-0078US	9189

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ALCATEL USA
INTELLECTUAL PROPERTY DEPARTMENT
3400 W. PLANO PARKWAY, MS LEGL2
PLANO, TX 75075

EXAMINER	
FERRIS, DERRICK W	
ART UNIT	**PAPER NUMBER**
2663	

DATE MAILED: 11/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/020,619	SRIDHAR, KAMAKSHI	
	Examiner	Art Unit	
	Derrick W. Ferris	2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 December 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-46* is/are pending in the application.

4a) Of the above claim(s) *1-8,32-37 and 44-46* is/are withdrawn from consideration.

5)☒ Claim(s) *19-31 and 41-43* is/are allowed.

6)☒ Claim(s) *9-11,14,17,18 and 38-40* is/are rejected.

7)☒ Claim(s) *12,13,15 and 16* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 December 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. **Claims 1, 2-8,** drawn to status information for traffic flows, classified in class 370, subclass 389.

II. **Claims 9-18, 38-40, 19-31, 41-43**, drawn to correcting congestion using a specific method implemented by time stamping of packets, classified in class 370, subclass 508. Please note that "Invention A" represented by claims 9-18 and 38-40 and "Invention B" represented by of claims 19-31 and 41-43 where combined to make the above group since both groups are similar enough as to require no additional burden for the examiner to search and/or consider.

III. **Claims 32-37 and 44-46**, drawn to correcting a lack of fairness by increasing bandwidth allocation for a first class of service, classified in class 370, subclass 230.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I, II and III are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination (group I) as claimed does not require the particulars of the subcombination (group II) as claimed because group I may use a different method in determining a load imbalance sine e.g., comprehensive claim 6 contains a "common field". In particular, a

"common field" as claimed may not indicate a method using time as further indicated by the recited language "consisting of a field". The subcombination (group II) has separate utility such as determining a difference between time. Furthermore, the combination for at least claim 2 further includes additional fields such as a fairness specific field, congestion control field, and load balancing field which are not required for group II. In the instant case, the combination (group III) as claimed does not require the particulars of the subcombination (group II) as claimed because group III does not require a specific method for detecting load imbalances which uses time stamped packets. In addition, group III provides separate utility by adjusting or increasing an allocated bandwidth for flows for a first class of service. Furthermore, although group II further comprises making a comparison first before being responsive where no comparison is made for group III (e.g., see compressive claim 15 of group II in comparison to claim 32 for group III). Furthermore, comprehensive claim 15 further increases the token bucket rate at the first node where claim 32 simply reduces the amount of traffic sent from the node (i.e., does necessarily require a token bucket). Finally, in addition to using a specific technique for detecting load imbalances (i.e., calculating a time difference and comparing that difference to a threshold), claim 9 further clarifies where congestion has been detected (i.e., on a first link) and more specifically that a second time is indicative of the time the packet was received at a second node. Finally, group I and III can also be restricted for the same reasons set forth above.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. Because these inventions are distinct for the reasons given above and the search required for Group I and II is not required for Group III (same also goes for Group II and III respectively), restriction for examination purposes as indicated is proper.

5. During a telephone conversation with Jessica W. Smith on 11/04/2005 a provisional election was made with out traverse to prosecute the invention of group II, **claims 9-18, 38-40, 19-31, 41-43**. Affirmation of this election must be made by applicant in replying to this Office action. **Claims 1-8, 32-37 and 44-46** are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. **Claims 9-11, 14, and 38** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application No. 2003/0048754 A1 to *Bruckman* in view of U.S. Patent No. 6,700,876 B1 to *DiNicola et al.* ("*DiNicola*").

As such to **claim 9**, *Bruckman* discloses an RPR network, see e.g., paragraph 0051 on page 4 and figure 1 as an example. *Bruckman* teaches sending latency measurements packets (LMP) from an originating node (i.e., a first node as claimed) to peering node (i.e., a second node as claimed) and then back to an originating node. As such, *Bruckman* teaches time stamping the packet with a first time indicative of a time the packet is sent to a second node as Txtg, see e.g., Table 1 and paragraph 0062 on page 4.

The LMP packet is further sent to the second node on a first link between the first and second nodes, the first link comprising a portion of the first ring, see e.g., paragraph 0052 on page 4. Upon receipt by the second node of the packet, the second node time stamps the packet with a second time indicative of a time the packet was received at the second node, is taught as Rxtp, see e.g., Table 1 and paragraphs 0065 on page 4 as well as paragraphs 0066 and 0069 on page 5 accordingly. In addition, a first class of service is taught by the CoS value, see e.g., Table 1 and paragraph 0061 on page 4.

Bruckman may be silent or deficient to the further limitation calculating a difference between a first and second times. In particular, although *Bruckman* teaches calculating a difference between Txtg (a first time) and Rxtg (not a second time), *Bruckman* also teaches a node-to-node latency measurement, see e.g., paragraph 0065 on page 4 and paragraph 0073 on page 5 thus teaching a difference between a first and second node in time. However, *Bruckman* is silent or deficient to the further limitation responsive to the *difference being greater than a predetermined threshold*, signaling to the first node that congestion has been detected on the first link between the first and second nodes.

DiNicola teaches the further recited limitation above at e.g., figure 3. In particular, at step 56 e.g., the difference between first and second times is calculated. Steps 62 and 66 further teach responsive to the *difference being greater than a predetermined threshold*, signaling to the first node that congestion has been detected on the first link between the first and second nodes. In particular, congestion is signaled since the token rate is set.

The proposed modification of the above-applied reference(s) necessary to arrive at the claimed subject matter would be to modify *Bruckman* by clarifying how congestion is handled once the time difference is calculated since it is well established in the art that latency is used in detecting congestion.

As such, examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include the above limitation. In particular, the motivation for modifying the reference or to combine the reference teachings would be preventing congestion. In particular, *DiNicola* cures the above-cited deficiency by providing a motivation found at e.g., column 2, lines 13-21. Thus the references teach the above claim limitation(s).

As to **claim 10**, the designated bit can be any of the other bits set in the LMP packet header, see e.g., Table 1 on page 4 of *Bruckman*.

As to **claim 11**, see e.g., the Txtg field in the packet header as taught e.g., in Table 1 on page 4 of *Bruckman*.

As to **claim 14**, see e.g., column 1, lines 57-64 of *DiNicola* which teaches reducing the traffic when congestion occurs (i.e., reducing the token bucket rate). Examiner notes that the motivation to make the above modification is the same as the parent claim.

As to **claim 38**, see similar rejection to claim 9.

8. **Claims 17-18 and 39-40** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application No. 2003/0048754 A1 to *Bruckman* in view of U.S. Patent No.

6,700,876 B1 to *DiNicola et al.* ("*DiNicola*") in further view of "Architectural Issues for Robust Access" to *Medard, et al.* ("*Medard*").

As such to **claims 17 and 18,** *Bruckman* and *DiNicola* discloses limitations in the parent claim

Bruckman and *DiNicola* are silent or deficient to the further limitation of using first and second wavelengths or WDMRPR. In particular, *Bruckman* teaches using RPR networks but may not explicitly teach WDM.

Medard teaches the further recited limitation above at e.g., left-hand column on page 117. In particular, *Medard* teaches that rings such as RPR can be either WDM OR DWDM where a ring is a wavelength.

The proposed modification of the above-applied reference(s) necessary to arrive at the claimed subject matter would be to modify *Bruckman* and *DiNicola* by including the above limitation.

As such, examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include the above limitation. In particular, the motivation for modifying the reference or to combine the reference teachings would be to use wavelengths in order to decrease the dependency on a physical topology. In particular, *Bruckman* and *DiNicola* cures the above-cited deficiency by teaching that WDM and DWDM implement rings using wavelengths. Second, there would be a reasonable expectation of success since both references teach ringed networks. Thus the references teach the above claim limitation(s).

As to **claims 39-40**, see similar rejection to claim 17 and 18 respectively.

Allowable Subject Matter

9. **Claims 19-31 and 41-43** are allowed.

10. **Claims 12-13, 15, and 16** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick W. Ferris whose telephone number is (571) 272-3123. The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571)272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Derrick W. Ferris
Examiner
Art Unit 2663

DWF

DERRICK FERRIS
PATENT EXAMINER